

REMARKS/ARGUMENTS

It is respectfully requested that this amendment be entered as it is believed to place the application in condition for allowance or in better condition for appeal.

The claims are finally rejected under 35 U.S.C. 103(a) as unpatentable over Fujishima et al. (U.S. 6,740,952) in view of Tada et al. (U.S. 6,525,390), Rumennik (U.S. 6,639,277), Van Zant, Ghandhi, Noda (U.S. 6,617,652), and Ranjan (U.S. 5,801,431).

Reconsideration is requested. To more clearly distinguish independent claim 1 from the references, claim 1 is amended to clarify that the second portion of the first field plate (portion 33 in Figure 1) is connected to drain 26 (through plate 38 and connectors 50 in application Figure 1)

This limitation is believed to fully distinguish, in concept, the difference between the present invention as set forth in claim 1 and the combination of Fujishima et al. and Tada et al.

Thus, Fujishima et al. does not teach, inter alia, a resurf region over the drift region. Rather, Fujishima et al. provide a P type layer 20 in Figure 15, having a (non-resurf) concentration of $5 \times 10^{16}/\text{cm}^3$ and a diffusion depth of $1 \mu\text{m}$ in the N type drain drift region 5 (of concentration $3 \times 10^{16}/\text{cm}^3$). (Fujishima, col. 37, lines 43-51).

Not surprisingly, Tada et al. (Tada and Fujishima are coinventors in both Tada et al. and Fujishima et al.) describes the same basic structure as described in Fujishima et al. but with a spiral polysilicon field plate 10. With reference to Figure 10, Tada et al. describe the N type drift region 3 but now with counterdoped P region 44 ($3 \times 10^{16} \text{ cm}^{-3}$). (Tada et al., col. 12, lines 17-28.)

Region 44 in Tada et al. like layer 20 in Fujishima et al., is not a resurf region.

It should be noted that a resurf region has a specific concentration such that the region will fully deplete before maximum voltage is applied to it. Such regions are typically formed by a charge of $1 \times 10^{12}/\text{cm}^2$ (see Ranjan 5,801,431 of record for a discussion of resurf regions.)

Neither Tada et al. nor Fujishima et al. employ a resurf region over a drift region. Rather, their P type implants are used to reduce resistivity (on resistance) and are not integral components of a field plate.

To further distinguish from the combination of Fujishima et al. and Tada et al., claim 1 is also amended to specify that the second portion of the first plate is connected to the drain. Thus, as shown in Figure 1, the first gap is the between plates connected to source and drain

respectively. This distinguishes from the plural gaps provided by the polysilicon spiral 10 in Tada et al.

Claims 2, 4, 6, 9, 11, 13 and 20 to 23 are each ultimately dependent on claim 1. Further, none of the secondary references suggest the novel resurf region and field plate as now set forth in independent claim 1 so that the dependent claims patentability distinguish from the references if only on this ground. Thus, for example, Rumennik et al. as well as the other secondary references fail to show applicants basic claimed concept of a resurf region with a multitiered field plate structure with progressively wider gaps in each field plate tier.

Accordingly, allowance or entry of this amendment for appeal is respectfully requested.

Respectfully submitted,

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